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Confessedly dependent, but on HIM  
Who gave, and who maintains old Nature's  
laws.

*Ballymena.*

—S.—

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SELECTED POETRY.

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LINES ON THE BIRTH-DAY OF MR.  
FOX; AT THE COMMEMORATION  
OF THE ANNIVERSARY IN GLAS-  
GOW.

SCOTS, who fir'd by Freedom's flame,  
Scots, whom Tyrants ne'er shall tame,  
Celebrate the deathless name,  
So dear to Liberty!

This natal day, this social hour,  
The "Joy of Grief" shall grateful pour  
Of smiling tears a sacred show'r,  
T' embalm his memory.

By the Negroes' broken chain,  
That Christian spot of deepest grain,  
That Pitt condemned—but let remain,  
'Twas Fox that set them free.

Who would preach, then blast reform,  
And prostitute Religion's form  
To raise Dissention direful storm,  
A traitor knave is he.

Who, for Liberty and Peace,  
With eloquence of ancient Greece,  
Bade bigot's howl, and war-cry cease,  
For ever blest be he.

Shall IRELAND still, for England's law,  
A sword outlaw'd and thankless draw?  
What IRELAND suffers, Scotland saw  
Before her faith was free.

We sing the fight where WALLACE led,  
And boast the field the Invader fled,  
T' our children point the warriors bed  
On gory Bannockburn.

But there is yet a nobler cause,  
When patriots strive for equal laws!  
Our silent tears (our best applause!)  
We shed on Fox's urn!

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THE EXILE.

[From the *Liverpool Mercury*.]

ADIEU to the land, once of freedom and  
health!  
Worth, genius, and beauty, adieu!  
The minions of power, and corruptions of  
wealth,  
Now drive me for ever from you.

I must go where convulsions unpillar the  
earth,  
And pestilent vapours prevail;  
Where the sun-beams from Heaven to dis-  
eases give birth,  
And death spreads his breath in the gale.

But rather to these would I willingly go,  
And yield myself up as their prey,  
Than suffer the feelings of anguish and  
woe,  
That would rise from my country's decay.

Against the harsh despot I struggle in vain,  
For Liberty's friends were too few:—  
Farewell, smiling vallies! farewell, native  
plain!  
My home and my country, adieu.

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DISCOVERIES AND IMPROVEMENTS IN ARTS, MANUFACTURES,  
AND AGRICULTURE.

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*Specification of the Patent granted to Robert Dickinson, of Great Queen-street, Lincoln's Inn-fields, in the County of Middlesex. Esq. and Henry Maudslay, in the Parish of St. Mary Lambeth, in the County of Surrey, Engineer, for a Process for sweetening Water and other Liquids, and applicable to other Purposes.*

THE process consists simply in forcing a stream or streams of air through the foul or tainted water intended to be rendered sweet, and this our process is particularly applicable to the purifying of water on board ship, which has become tainted and stinking in the water casks. Having mentioned the nature of our pro-

cess, no competent mechanist can be at a loss to adapt means to the end proposed. The means which we have found best for this purpose are either bellows or a pump. If bellows be employed, a tube or nose made of leather, or any similar contrivance, will be found a convenient appendage, fastened to the nozzle of the bellows, for conveying the air into the water cask, and it will be found convenient to attach to the end intended to discharge the air a piece of tube, made of iron or copper, and perforated with small holes, to divide the air into numerous small streams, that the surface of water brought into contact with the air may be the greater.

If a pump be employed, which we prefer, it should be furnished with a similar nose or pipe, and the valves must be so disposed that the pump on being worked may at each stroke take in a charge of air, and force it to pass through the water intended to be purified. In either case the tube that discharges the air into the water should pass into it deep enough to reach the bottom of the cask, and the effect will be, that the offensive gas held in solution in the water (and which on board ship is generally hydrogen derived from the decomposition of a portion of the water, and holding different substances in solution derived from the decomposition of the wood,) will, by continuing the process, be in a short time expelled from the water; after which the water should be left at rest for a little time, to allow its insoluble impurities to subside.

We need hardly add, that the pump intended for this process may, by a judicious arrangement and adaptation of parts, be rendered applicable to other very useful purposes on board a ship, as for watering a ship from a long side, and conveying the water when required from the hold to the deck, and by means of an air vessel and discharging pipe, judiciously attached to the pump, it may be employed as an engine for wetting the sails or extinguishing fire. And, in addition to all these uses, the same pump may be easily adapted to the purpose of ventilation, by drawing foul air from the hold and replacing it with fresh air. These things are mentioned merely because it is particularly desirable on board ships that every implement should be made as universal in its application as may be consistent with its primary purpose.

In witness whereof, &c.

*On the Motions of the Tendrils of Plants; by Thomas Andrew Knight, esq. F.R.S.*

[From the Philosophical Transactions of the Royal Society of London.]

The motions of the tendrils of plants, and the efforts they apparently make to approach and attach themselves to contiguous objects, have been supposed by many naturalists to originate in some degrees of sensation and perception: and though other naturalists have rejected this hypothesis, few or no experiments have been made by them to ascertain with what propriety the various motions of tendrils, of different kinds, can be attributed to peculiarity of organization, and the operation of external causes. I was consequently induced, during the last summer, to employ a considerable portion of time to watch the motions of the tendrils of different species of plants; and I now give an account of the observations I was enabled to make.

The plants selected were the Virginian creeper, (the *ampelopsis quinquefolia* of Michaux,) the ivy, and the common vine and pea.

A plant of the *ampelopsis*, which grew in a garden-pot, was removed to a forcing-house in the end of May, and a single shoot from it was made to grow perpendicularly upwards, by being supported in that position by a very slender bar of wood, to which it was bound. The plant was placed in the middle of the house, and was fully exposed to the sun; and every object around it was removed far beyond the reach of its tendrils. Thus circumstanced, its tendrils, as soon as they were nearly full grown, all pointed towards the north, or back wall, which was distant about eight feet: but not meeting with any thing in that direction to which they could attach themselves, they declined gradually towards the ground, and ultimately attached themselves to the stem beneath, and the slender bar of wood.

A plant of the same species was placed at the east end of the house, near the glass, and was in some measure screened from the perpendicular light; when its tendrils pointed towards the west, or centre of the house, as those under the preceding circumstances had pointed towards the north and back wall. This plant was removed to the west end of the house, and exposed to the evening sun, being screened as in the preceding case, from the perpendicular light; and its tendrils within a few